

Date: Thursday, 18/09/2008 11:13:26 AM
 User: Julie Lecocq

Process Sheet

| | | | | | | | |
|-----------------------|--|--|--|------------------|------------------------------|--|--|
| Customer | : CU-DAR001 Dart Helicopters Services | | | Drawing Name | : TUBE ASSEMBLY | | |
| Job Number | : 42108 | | | Part Number | : D3304041 | | |
| Estimate Number | : 11198 | | | Drawing Number | : D3304 REV. B | | |
| P.O. Number | : | | | Project Number | : N/A | | |
| This Issue | : 18/09/2008 S.O. No. : | | | Drawing Revision | : B | | |
| Prsht Rev. | : NC | | | Material | : | | |
| First Issue | : / / Type : MACHINED PARTS | | | Due Date | : 10/10/2008 Qty: 4 Um: Each | | |
| Previous Run | : 41901 | | | | | | |
| Written By | : | | | | | | |
| Checked & Approved By | : JUL 08.9.18 | | | | | | |
| Comment | : Est: C 04.11.17 Step 13 revised KJ/JLM | | | | | | |

Additional Product

Job Number:



| Seq. #: | Machine Or Operation: | Description : | |
|---------|-----------------------|--|-------------------|
| 1.0 | M304TR0875W065 | 304 round tube .875 x .065w | |
| | | Comment: Qty.: 1.4109 f(s)/Unit Total : 5.6435 f(s) Material: AISI 304/316 SS tubing 0.875" x 0.065" wall (M304TR0.875W.065) Identify for D3304-1 Batch: M109007 | J.F. 08/09/21 (4) |
| 2.0 | BAND SAW | BAND SAW | |
| | | Comment: BAND SAW Cut to length | J.F. 08/09/21 (4) |
| 3.0 | LATHE CONV. | CONVENTIONAL LATHE | |
| | | Comment: CONVENTIONAL LATHE Cut blank: 15.75" as per Dwg D3304 Turn as per Dwg D3304 Identify as D3304-1 | J.F. 08/09/21 (4) |
| 4.0 | QC2 | INSPECT PARTS AS THEY COME OFF MACHINE | |
| | | Comment: INSPECT PARTS AS THEY COME OFF MACHINE | J.F. 08/09/21 (4) |
| 5.0 | QC8 | SECOND CHECK | |
| | | Comment: SECOND CHECK | SP 08/09/21 (4) |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
| | | | | | | | |
| | | | | | | | |

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
| | | | | | | | | |
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NOTE: Date & initial all entries

Date: Thursday, 18/09/2008 11:13:26 AM
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|---|-----------------------|-------------------------------|
| Customer: CU-DAR001 Dart Helicopters Services | | Drawing Name: TUBE ASSEMBLY |
| Job Number: 42108 | | Part Number: D3304041 |
| Job Number: | | |
| Seq. #: | Machine Or Operation: | Description : |
| 6.0 | SMALL FAB 1 | SMALL & MEDIUM FAB RESOURCE 1 |
| Comment: SMALL & MEDIUM FAB RESOURCE 1 Deburr Drill as per Dwg D3304 using drill Jig D3304-T1 Deburr | | |
| 7.0 | QC5 | INSPECT WORK TO CURRENT STEP |
| Comment: INSPECT WORK TO CURRENT STEP | | |
| 8.0 | D33045 | Bracket |
| Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s) Bracket Pick: Qty Part Number Description Batch 1 D3304-5 Bracket 340203 | | |
| 9.0 | LARGE FAB 1 | LARGE FABRICATION RESOURCE 1 |
| Comment: LARGE FABRICATION RESOURCE 1 Weld bracket as per Dwg D3304 and QSI 004 M107051 EL 8-10-30 (X4) | | |
| 10.0 | QC9 | VISUAL WELDING INSPECTION |
| Comment: VISUAL WELDING INSPECTION | | |
| 11.0 | QC5 | INSPECT WORK TO CURRENT STEP |
| Comment: INSPECT WORK TO CURRENT STEP | | |
| 12.0 | POWDER COATING | POWDER COATING |
| Comment: POWDER COATING Powder Coat Grey Sandtex (Ref: 4.3.5.6) as per QSI 005 4.3 START TIME: 9:10 AM OVEN TEMPERATURE: 320°F FINISH TIME: 9:40 AM EL 08/10/31 | | |

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Date: Thursday, 18/09/2008 11:13:26 AM
User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 42108

Part Number: D3304041

Job Number:



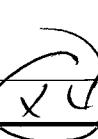
Seq. #: Machine Or Operation:

Description :

13.0 QC3



INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT

08-10-31

14.0 BLBS0016

PIP PIN



Comment: Qty.: 1.0000 Each(s)/Unit Total : 4.0000 Each(s)

PIP PIN

Pick:

| Qty | Part Number | Description | Batch |
|-----|-------------|-------------|---------|
| 1 | BLBS-0016 | Pip Pin | M108910 |

SP

15.0 CBL460

Loop Sleeve



Comment: Qty.: 2.0000 Each(s)/Unit Total : 8.0000 Each(s)

Loop Sleeve

Pick:

| Qty | Part Number | Description | Batch |
|-----|-------------|-------------|---------|
| 2 | CBL-460 | Loop Sleeve | M109062 |

8/10/3

SP

16.0 CBL1240

Cable



Comment: Qty.: 1.0417 f(s)/Unit Total : 4.1668 f(s)

Cable

Pick:

| Qty | Part Number | Description | Batch |
|-------|-------------|-------------|---------|
| 12.5" | CBL-1240 | Cable | M107234 |

8/11/3

SP

17.0 SMALL FAB 1

SMALL & MEDIUM FAB RESOURCE 1



Comment: SMALL & MEDIUM FAB RESOURCE 1

Assemble lanyard and pip pin as per Dwg D3304

FF 08/11/03

18.0 QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

19.0 PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify with P/N and B/N as per Dwg using a permanent fine point marker, then Stock

Location: SJ 188

8/11/04 08/11/04 SP

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
|------|------|----------------------------------|-----------------------------|---------------------------------|----------------|---------------------------|-----------------------|--------------------------|
| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

Date: Thursday, 18/09/2008 11:13:26 AM
User: Julie Lecocq

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: TUBE ASSEMBLY

Job Number: 42108

Part Number: D3304041

Job Number:



Seq. #: Machine Or Operation:

Description :

20.0 QC21

FINAL INSPECTION/W/O RELEASE



08/11/05 KJ

Comment: FINAL INSPECTION/W/O RELEASE

Job Completion



mf 08-11-04

| W/O: | | WORK ORDER CHANGES | | | | | |
|------|------|--------------------|----|------|-----|-------------------------------------|--------------------------|
| DATE | STEP | PROCEDURE CHANGE | By | Date | Qty | Approval Chief Eng / Prod Mgr | Approval QC Inspector |
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Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

| NCR: | | WORK ORDER NON-CONFORMANCE (NCR) | | | | | | |
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| DATE | STEP | Description of NC Section A | Corrective Action Section B | | | Verification Section C | Approval Chief Eng | Approval QC Inspector |
| | | | Initial Chief Eng | Action Description Chief Eng | Sign & Date | | | |
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NOTE: Date & initial all entries

| | | |
|------------------------------|--------------|-------------|
| DART AEROSPACE LTD | Work Order: | 42108 |
| Description: Tube Assembly | Part Number: | D3304-1 |
| Inspection Dwg: D3304 Rev: B | | Page 1 of 1 |

FIRST ARTICLE INSPECTION CHECKLIST

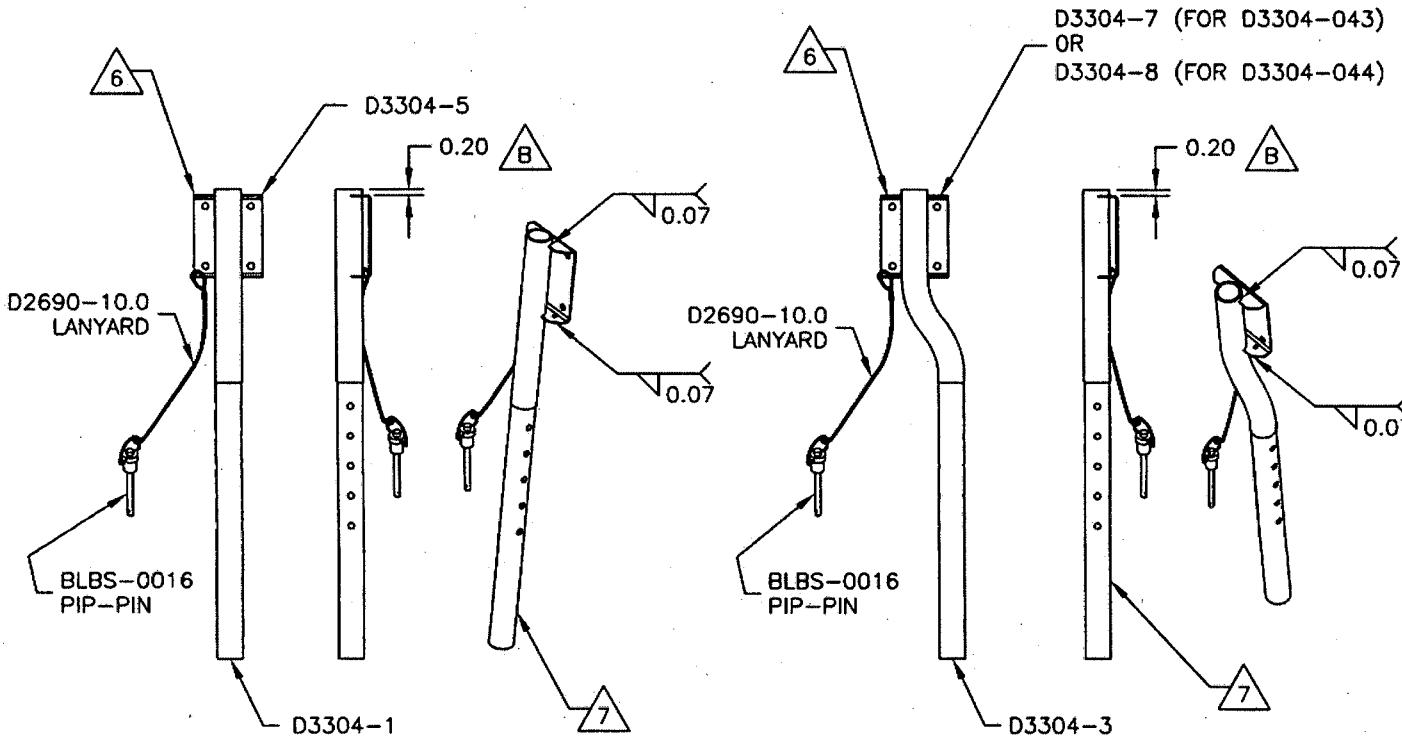
X First Article Prototype

| | | | | | |
|--------------|----------|-------------|----------|---------------------|-----|
| Measured by: | J.F. | Audited by: | S.S. | Prototype Approval: | N/A |
| Date: | 08/09/21 | Date: | 08/09/21 | Date: | N/A |

| Rev | Date | Change | Revised by | Approved |
|------------|-------------|-------------------------|-------------------|-----------------|
| A | 04.09.08 | New Issue P/O D3304-041 | KJ/JLM | |
| B | 06.03.09 | Dwg Rev updated | KJ/JLM | |
| C | 08.07.23 | R0.12 dimension removed | KJ/DD | BS |

DART

| DESIGN RF | DRAWN BY RF | DART AEROSPACE LTD | | |
|---------------------|------------------------|-----------------------------------|-----------------------------|--------------|
| CHECKED <i>H</i> | APPROVED <i>H</i> | DRAWING NO. D3304 | HAWKESBURY, ONTARIO, CANADA | |
| DATE 05.07.15 | TITLE TUBE ASSEMBLY | REV. B | | SHEET 1 OF 4 |
| A | 04.08.18 | NEW ISSUE | | |
| B | 05.07.15 | UPDATE DIMENSIONS; ADD D3304-7/-8 | | SCALE 1:6 |



D3304-041 TUBE ASSEMBLY

**D3304-044 TUBE ASSEMBLY (SHOWN)
D3304-043 OPPOSITE**

RELEASED
25.08.11
H

D3304-041/-043/-044 NOTES:

- 1) FINISH: POWDER COAT GREY SANTEX (REF. 4.3.5.6) PER DART QSI 005 4.3
- 2) WELD PER DART QSI 004
- 3) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) ALL DIMENSIONS ARE IN INCHES
- 5) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 6) IDENTIFY AS INDICATED USING FINE POINT PERMANENT INK MARKER "TCCA-PDA, DART AEROSPACE LTD, P/N D3304-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"
- 7) IF BEING ASSEMBLED WITH D3303-041, ADD THE FOLLOWING USING A FINE POINT PERMANENT INK MARKER: "TCCA-PDA, DART AEROSPACE LTD, P/N D412-724-XXX B/N BXXXXX, FOR PRODUCT ELIGIBILITY SEE PDA04-11"

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WITHOUT NOTICE

RETURN TO
ENGINEERING

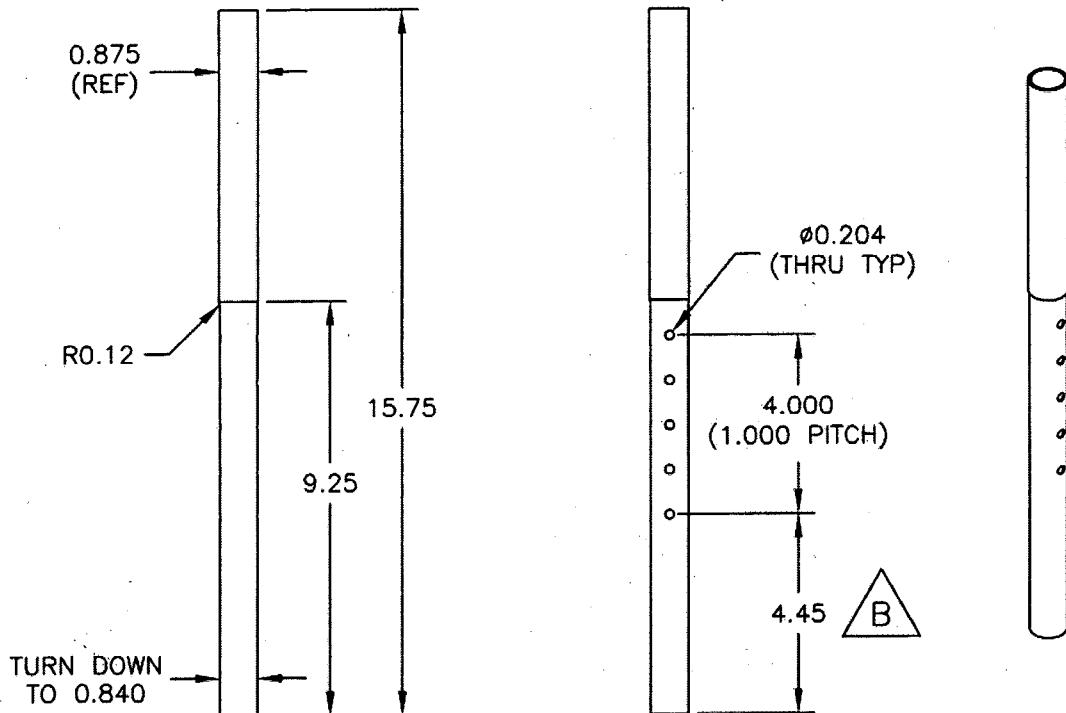
WORK ORDER
NO 42102

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DART

| | | | |
|------------------------------|-------------------------------|---|------------------------|
| DESIGN RF | DRAWN BY RF | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED <i>[initials]</i> | APPROVED <i>[initials]</i> | DRAWING NO. D3304 | REV. B SHEET 2 OF 4 |
| DATE 05.07.15 | | TITLE TUBE ASSEMBLY | SCALE 1:4 |

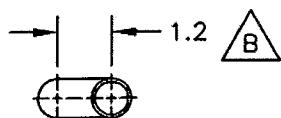
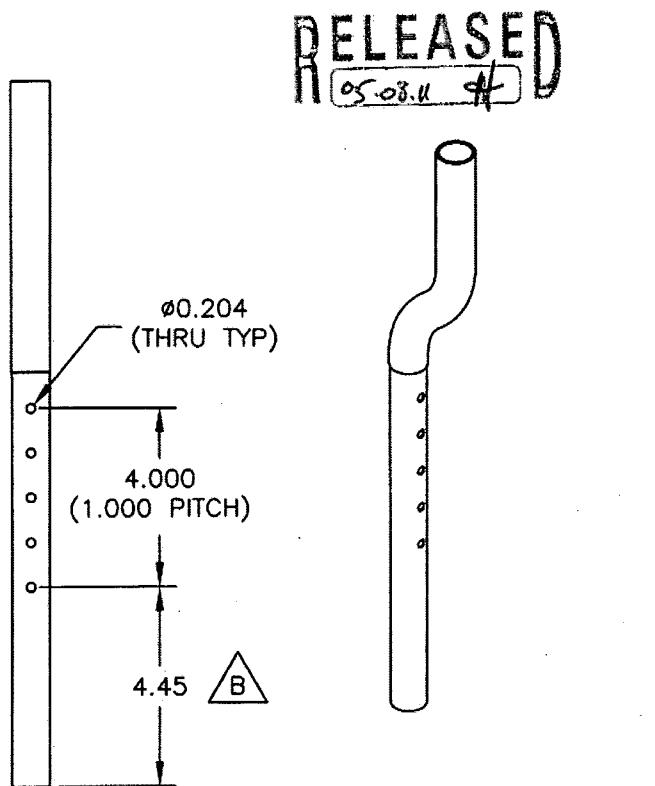
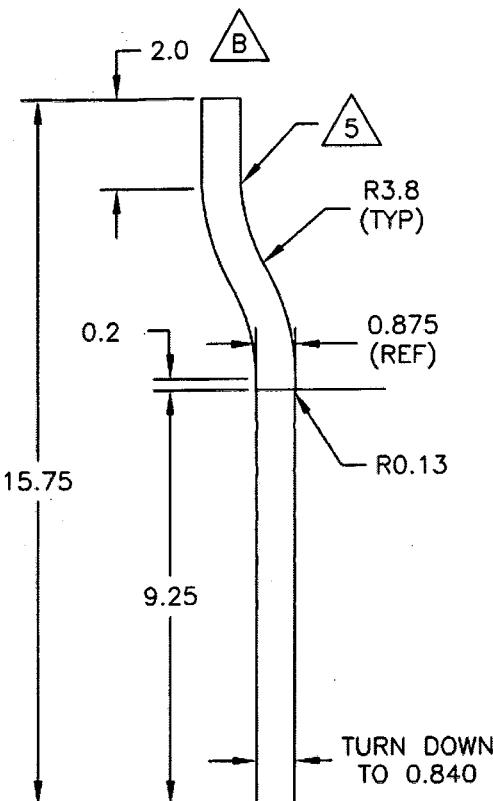
RELEASED
(05.08.11)**D3304-1 TUBE****D3304-1 NOTES:**

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE Ø0.875 x 0.065 WALL (REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015

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NO. *42108*

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| | | | |
|-------------------------------|--------------------------------|---|------------------------|
| DESIGN RF | DRAWN BY RF | DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA | |
| CHECKED <i>[Signature]</i> | APPROVED <i>[Signature]</i> | DRAWING NO. D3304 | REV. B SHEET 3 OF 4 |
| DATE 05.07.15 | | TITLE TUBE ASSEMBLY | SCALE 1:4 |

**D3304-3 TUBE****D3304-3 NOTES:**

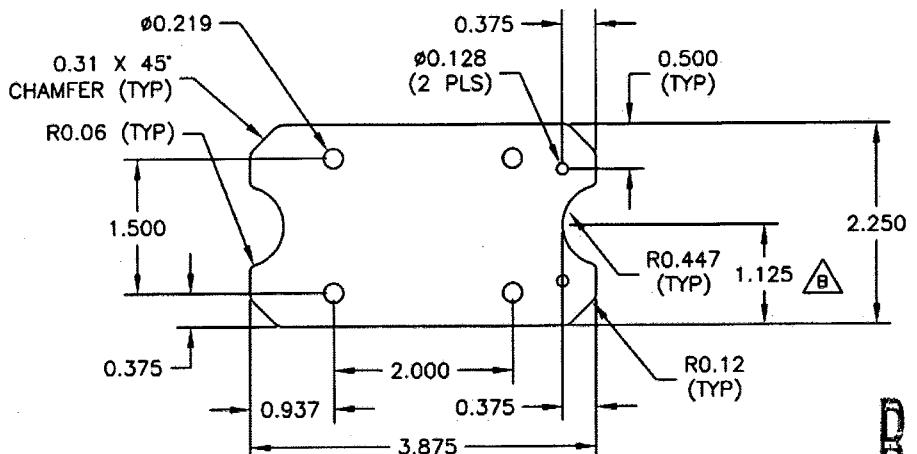
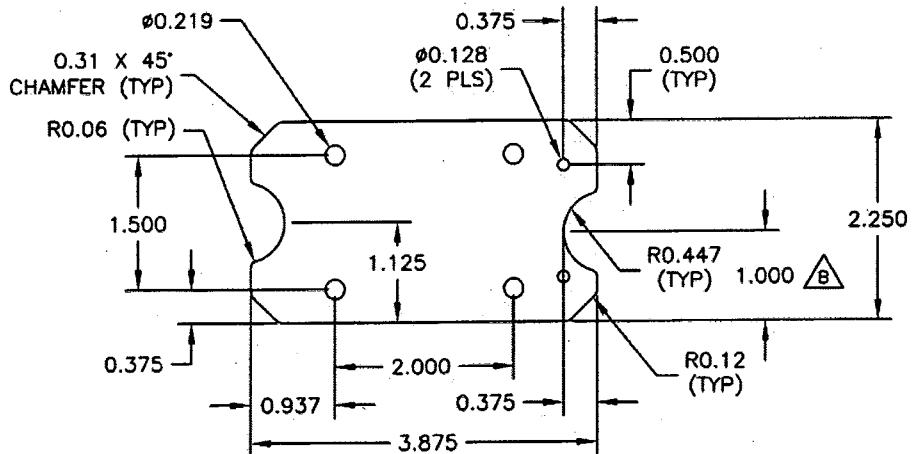
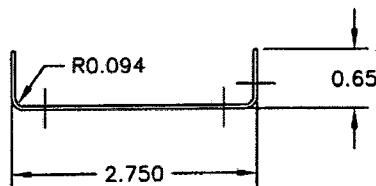
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL TUBE Ø0.875 x 0.065 WALL (REF. DART SPEC M304TR0.875W.065) ENSURE SEAMLESS TUBE IS USED
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015
- 5) BEND LINES 9.625, 13.375 DIMENSIONS

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| | | | |
|-------------------------------|--------------------------------|---|------------------------|
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| CHECKED <i>[Signature]</i> | APPROVED <i>[Signature]</i> | DRAWING NO. D3304 | REV. B SHEET 4 OF 4 |
| DATE 05.07.15 | | TITLE TUBE ASSEMBLY | SCALE 1:2 |

**RELEASED**
05.09.10**D3304-5 FLAT PATTERN****D3304-7/-8 FLAT PATTERN****D3304-5/-7 BRACKET
D3304-8 OPPOSITE**

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WITHOUT NOTICE
WORK ORDER
NO. 42108

NOTES:

- 1) MATERIAL: AISI 304/316 SS 0.040 THICK SHEET (REF. DART SPEC M304S20GA)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 3) ALL DIMENSIONS ARE IN INCHES
- 4) BREAK ALL SHARP EDGES 0.005 TO 0.015

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